U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Sundry Print Report

08/30/2021

Well Name: EL CAMPEON FED COM	**Well Location:**	**County or Parish/State:**
Well Number: 434H	**Type of Well:** OIL WELL	**Allottee or Tribe Name:**
Lease Number: NMNM126974	**Unit or CA Name:**	**Unit or CA Number:**
US Well Number: 3002549274	**Well Status:** Approved Application for Permit to Drill	**Operator:** TITUS OIL AND GAS PRODUCTION LLC

Notice of Intent

Type of Submission: Notice of Intent

Type of Action Other

Date Sundry Submitted: 08/10/2021

Time Sundry Submitted: 10:49

Date proposed operation will begin: 08/24/2021

Procedure Description: Depth change from 12,716' TVD and 20,955' MD to 12,579' TVD and 20,639' MD; target change within the Wolfcamp formation; addition of intermediate contingency remediation cement plan; BOP change from 3M/10M to 5M/10M; addition of multi-bowl wellhead; supporting documentation attached for the above changes. Attachments: Updated Drilling Plan Updated Directional Plan Updated Directional AC Report Rig-correct Choke Hose Certs Multi-bowl Wellhead Schematic 5M BOP Schematic

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

5M___H_P_614___BOP__CHOKE__FLEX_HOSE_APD_INFORMATION_20210805144419.pdf

Choke_Hose_SN_64409_20210805144356.pdf

El_Campeon_Fed_Com_434H___Plan_4_08_05_21_20210805144355.pdf

El_Campeon_Fed_Com_434H___APD_Temp_20210805144355.pdf

El_Campeon_Fed_Com_434H___Plan_4_08_05_21_AC_Report_20210805144355.pdf

13_5_8_10k_Slim_Bore_Conductor_Cutoff__49in_Nabor_Rig_20210805144355.pdf

Well Name: EL CAMPEON FED COM

Well Location:

County or Parish/State:

Well Number: 434H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM126974

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002549274

Well Status: Approved Application for Permit to Drill

Operator: TITUS OIL AND GAS PRODUCTION LLC

Conditions of Approval

Specialist Review

El_Campeon_Fed_Com_434H_COA_20210818060023.pdf

Operator Certification

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: RYAN DELONG

Signed on: AUG 10, 2021 10:49 AM

Name: TITUS OIL AND GAS PRODUCTION LLC

Title: Regulatory Manager

Street Address: 420 Throckmorton Street, Suite 1150

City: Fort Worth **State:** TX

Phone: (817) 852-6370

Email address: rdelong@titusoil.com

Field Representative

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

BLM Point of Contact

BLM POC Name: ZOTA M STEVENS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752345998

BLM POC Email Address: ZSTEVENS@BLM.GOV

Disposition: Approved

Disposition Date: 08/30/2021

Signature: Zota Stevens

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
	98234	WC-025 G-09 S263619C; Wolfcamp

4 Property Code	5 Property Name	6 Well Number
	EL CAMPEON FED COM	434H

7 OGRID No.	8 Operator Name	9 Elevation
373986	TITUS OIL & GAS PRODUCTION LLC	3172'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	20	26-S	35-E		558'	SOUTH	650'	EAST	LEA

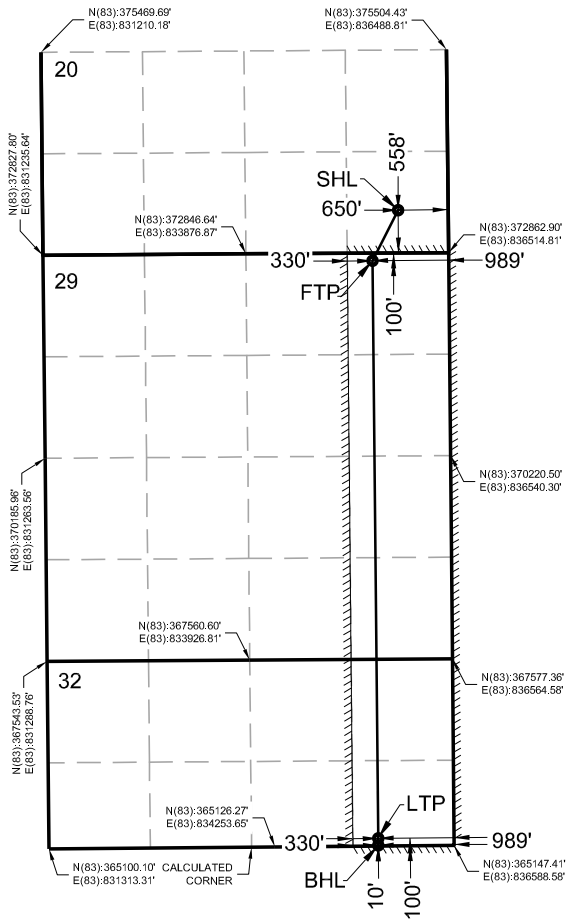
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	32	26-S	35-E		10'	SOUTH	989'	EAST	LEA

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
240	Y		

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

[16]



SURFACE HOLE LOCATION (SHL)
NEW MEXICO EAST - NAD 83
X= 835859.31 LAT.= 32.02304205° N
Y= 373416.75 LONG.= 103.38300787° W
NEW MEXICO EAST - NAD 27
X= 794670.97 LAT.= 32.02291545° N
Y= 373359.55 LONG.= 103.38254822° W
558' FSL, 650' FEL - SECTION 20

FIRST TAKE POINT (FTP)
NEW MEXICO EAST - NAD 83
X=835526.79 LAT.= 32.02123616° N
Y=372756.81 LONG.= 103.38409939° W
NEW MEXICO EAST - NAD 27
X=794338.42 LAT.= 32.02110956° N
Y=372699.62 LONG.= 103.38363980° W
100' FNL, 989' FEL - SECTION 29
100' FNL, 330' FWL - LEASE

LAST TAKE POINT (LTP)
NEW MEXICO EAST - NAD 83
X=835598.76 LAT.= 32.00056930° N
Y=365238.45 LONG.= 103.38408023° W
NEW MEXICO EAST - NAD 27
X=794410.07 LAT.= 32.00044260° N
Y=365181.47 LONG.= 103.38362180° W
100' FSL, 989' FEL - SECTION 32
100' FSL, 330' FWL - LEASE

BOTTOM HOLE LOCATION (BHL)
NEW MEXICO EAST - NAD 83
X=835599.65 LAT.= 32.00032192° N
Y=365148.46 LONG.= 103.38407991° W
NEW MEXICO EAST - NAD 27
X=794410.95 LAT.= 32.00019521° N
Y=365091.47 LONG.= 103.38362149° W
10' FSL, 989' FEL - SECTION 32
10' FSL, 330' FWL - LEASE

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 1/22/2020 Date

Ryan DeLong - Regulatory Manager
Printed Name

rdelong@titusoil.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey

Signature and Seal of Professional Surveyor

GARRETT J SMELKER
NEW MEXICO
25036
01/15/2020
PROFESSIONAL SURVEYOR

Certificate Number

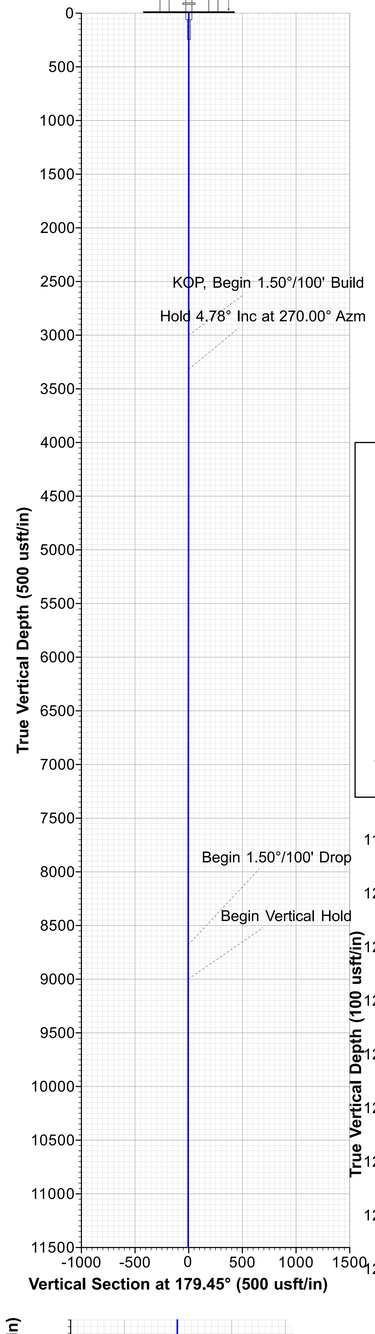
Project: Lea County, NM - (NAD83 NME)
Site: El Campeon Fed Com
Well: 434H
Wellbore: OH
Design: Plan 4 08-05-21
Rig: H&P 474

PHOENIX TECHNOLOGY SERVICES

Azimuths to Grid North
True North: -0.50°
Magnetic North: 5.99°

Magnetic Field
Strength: 47574.3nT
Dip Angle: 59.64°
Date: 2/29/2020
Model: MVHD

RKB @ 3198.50usft (H&P 474)
Ground Level: 3172.00



WELL DETAILS

Ground Level: 3172.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	373416.75	835859.31	32° 1' 22.951380 N	103° 22' 58.828332 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL v4 - El Campeon Fed Com 434H	12579.00	-8268.29	-259.66	365148.46	835599.65	32° 0' 1.158954 N	103° 23' 2.687706 W
LTPv3 - El Campeon Fed Com 434H	12579.00	-8178.30	-260.55	365238.45	835598.76	32° 0' 2.049487 N	103° 23' 2.688865 W
FTPv3 - El Campeon Fed Com 434H	12584.00	-659.94	-332.52	372756.81	835526.79	32° 1' 16.450183 N	103° 23' 2.757814 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	0.00	0.00		KOP, Begin 1.50°/100' Build
3	3318.62	4.78	270.00	3318.25	0.00	-13.28	1.50	270.00	-0.13		Hold 4.78° Inc at 270.00° Azm
4	8700.83	4.78	270.00	8681.75	0.00	-461.72	0.00	0.00	-4.43		Begin 1.50°/100' Drop
5	9019.45	0.00	0.00	9000.00	0.00	-475.00	1.50	180.00	-4.56		Begin Vertical Hold
6	12030.49	0.00	0.00	12011.04	0.00	-475.00	0.00	0.00	-4.56		KOP2, Begin 10.00°/100' Build
7	12930.89	90.04	168.45	12584.00	-561.75	-360.20	10.00	168.45	558.26		LP, Hold 90.04° Inc, Begin 4.00°/100' Turn
8	13205.85	90.04	179.45	12583.81	-834.75	-331.26	4.00	90.01	831.53		Hold 179.45° Azm
9	20639.73	90.04	179.45	12579.00	-8268.29	-259.66	0.00	0.00	8265.42	BHL v4 - El Campeon Fed Com 434H	TD at 20639.74

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone

Local Origin: Well 434H, Grid North

Latitude: 32° 1' 22.951380 N
Longitude: 103° 22' 58.828332 W

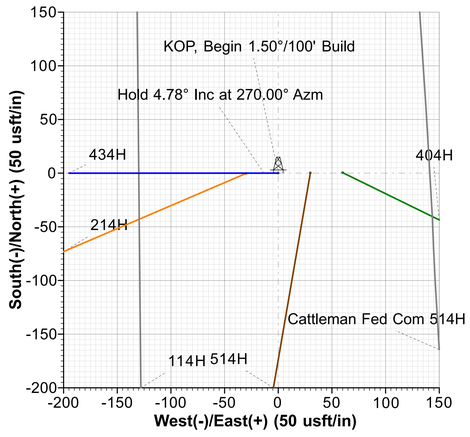
Grid East: 835859.31
Grid North: 373416.75
Scale Factor: 1.000

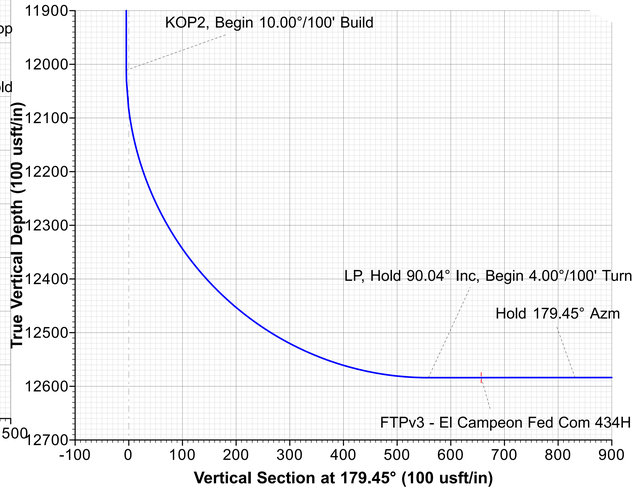
Geomagnetic Model: MVHD
Sample Date: 29-Feb-20
Magnetic Declination: 6.49°
Dip Angle from Horizontal: 59.64°
Magnetic Field Strength: 47574.28649536nT

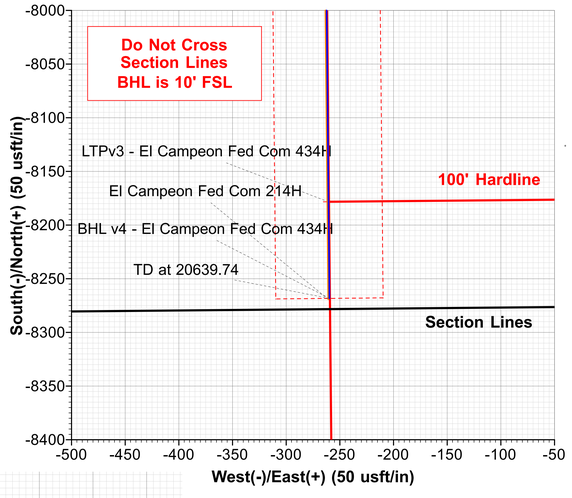
To convert a Magnetic Direction to a Grid Direction, Add 5.99°
To convert a Magnetic Direction to a True Direction, Add 6.49° East
To convert a True Direction to a Grid Direction, Subtract 0.50°

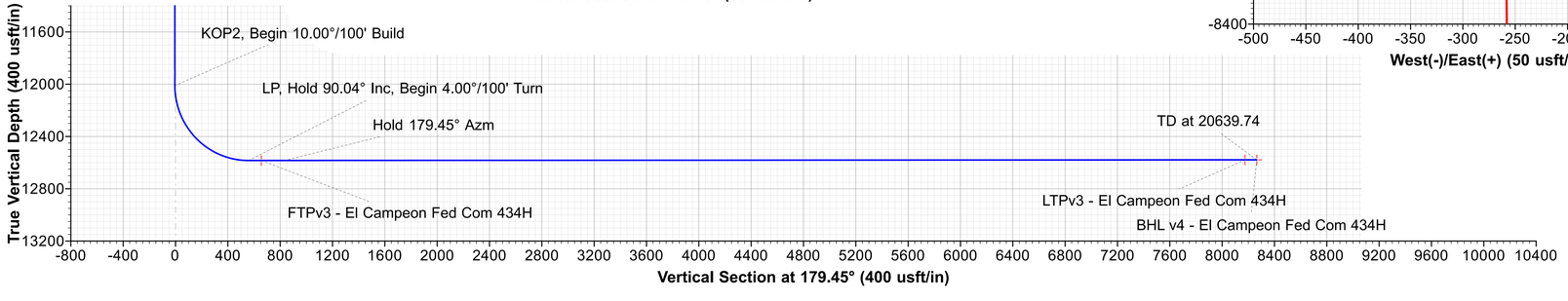
LEGEND

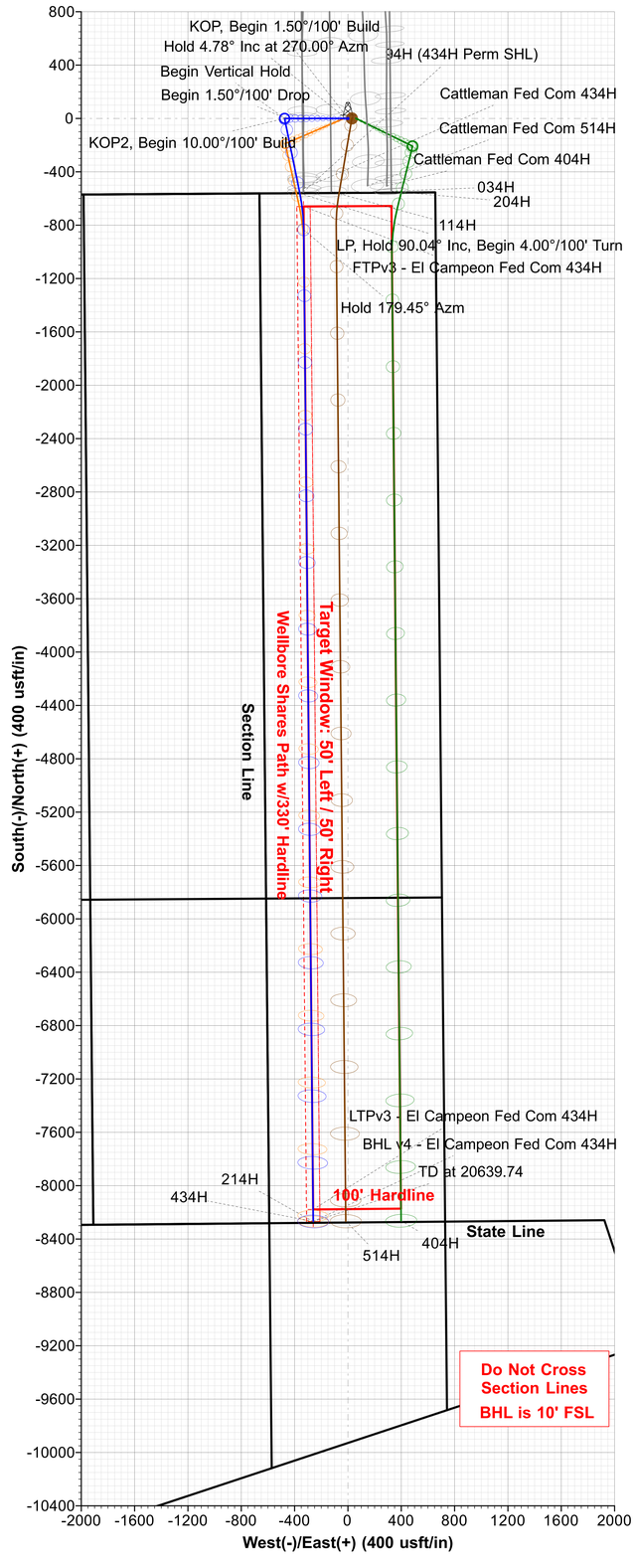
- 214H, OH, Plan 1 08-05-21 V0
- 514H, OH, Plan 4 08-05-21 V0
- 114H, OH, Plan 3 (Shift Lat 210'E) V0
- 404H, OH, Plan 4 08-05-21 V0
- Cattleman Fed Com 404H, OH / 67732, Surveys (H&P 474) V0
- 204H, OH, Plan 3 V0
- Cattleman Fed Com 434H, OH / 67733, Surveys (H&P 474) V0
- Cattleman Fed Com 514H, OH / 67734, Surveys (H&P 474) V0
- 034H, OH, Plan 3 V0
- 94H (434H Perm SHL), OH, Plan 3 V0
- Plan 4 08-05-21











Date: 8:57, August 05 2021

PHOENIX
TECHNOLOGY SERVICES

Titus Oil & Gas Production, LLC

Lea County, NM - (NAD83 NME)
El Campeon Fed Com
434H

OH

Plan: Plan 4 08-05-21

Standard Planning Report

05 August, 2021

TITUS OIL GAS LLC

PHOENIX TECHNOLOGY SERVICES

Planning Report

TITUS OIL GAS LLC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 434H
Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3198.50usft (H&P 474)
Project:	Lea County, NM - (NAD83 NME)	**MD Reference:**	RKB @ 3198.50usft (H&P 474)
Site:	El Campeon Fed Com	**North Reference:**	Grid
Well:	434H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 4 08-05-21		

Project Lea County, NM - (NAD83 NME)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site El Campeon Fed Com

Site Position:		**Northing:**	373,195.63 usft	**Latitude:**	32° 1' 20.984376 N
From:	Map	**Easting:**	833,309.19 usft	**Longitude:**	103° 23' 28.469580 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.50 °

Well 434H

Well Position	**+N/-S**	221.12 usft	**Northing:**	373,416.75 usft	**Latitude:**	32° 1' 22.951380 N
	+E/-W	2,550.12 usft	**Easting:**	835,859.31 usft	**Longitude:**	103° 22' 58.828332 W
Position Uncertainty		1.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,172.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	2/29/2020	6.49	59.64	47,574.28649536

Design Plan 4 08-05-21

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.45

Plan Survey Tool Program **Date** 8/5/2021

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,639.73	Plan 4 08-05-21 (OH)	MWD+HDGM+MS OWSG Rev.2 MWD + HDGM +	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,318.62	4.78	270.00	3,318.25	0.00	-13.28	1.50	1.50	0.00	270.00	
8,700.83	4.78	270.00	8,681.75	0.00	-461.72	0.00	0.00	0.00	0.00	
9,019.45	0.00	0.00	9,000.00	0.00	-475.00	1.50	-1.50	0.00	180.00	
12,030.49	0.00	0.00	12,011.04	0.00	-475.00	0.00	0.00	0.00	0.00	
12,930.89	90.04	168.45	12,584.00	-561.75	-360.20	10.00	10.00	0.00	168.45	
13,205.85	90.04	179.45	12,583.81	-834.75	-331.26	4.00	0.00	4.00	90.01	
20,639.73	90.04	179.45	12,579.00	-8,268.29	-259.66	0.00	0.00	0.00	0.00	BHL v4 - El Campeon

PHOENIX TECHNOLOGY SERVICES

Planning Report

TITUS OIL GAS LLC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 434H
Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3198.50usft (H&P 474)
Project:	Lea County, NM - (NAD83 NME)	**MD Reference:**	RKB @ 3198.50usft (H&P 474)
Site:	El Campeon Fed Com	**North Reference:**	Grid
Well:	434H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 4 08-05-21		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 1.50°/100' Build									
3,100.00	1.50	270.00	3,099.99	0.00	-1.31	-0.01	1.50	1.50	0.00
3,200.00	3.00	270.00	3,199.91	0.00	-5.23	-0.05	1.50	1.50	0.00
3,300.00	4.50	270.00	3,299.69	0.00	-11.77	-0.11	1.50	1.50	0.00
3,318.62	4.78	270.00	3,318.25	0.00	-13.28	-0.13	1.50	1.50	0.00
Hold 4.78° Inc at 270.00° Azm									
3,400.00	4.78	270.00	3,399.35	0.00	-20.06	-0.19	0.00	0.00	0.00
3,500.00	4.78	270.00	3,499.00	0.00	-28.39	-0.27	0.00	0.00	0.00
3,600.00	4.78	270.00	3,598.65	0.00	-36.73	-0.35	0.00	0.00	0.00
3,700.00	4.78	270.00	3,698.30	0.00	-45.06	-0.43	0.00	0.00	0.00
3,800.00	4.78	270.00	3,797.96	0.00	-53.39	-0.51	0.00	0.00	0.00
3,900.00	4.78	270.00	3,897.61	0.00	-61.72	-0.59	0.00	0.00	0.00
4,000.00	4.78	270.00	3,997.26	0.00	-70.05	-0.67	0.00	0.00	0.00
4,100.00	4.78	270.00	4,096.91	0.00	-78.38	-0.75	0.00	0.00	0.00
4,200.00	4.78	270.00	4,196.57	0.00	-86.72	-0.83	0.00	0.00	0.00
4,300.00	4.78	270.00	4,296.22	0.00	-95.05	-0.91	0.00	0.00	0.00
4,400.00	4.78	270.00	4,395.87	0.00	-103.38	-0.99	0.00	0.00	0.00
4,500.00	4.78	270.00	4,495.52	0.00	-111.71	-1.07	0.00	0.00	0.00
4,600.00	4.78	270.00	4,595.18	0.00	-120.04	-1.15	0.00	0.00	0.00
4,700.00	4.78	270.00	4,694.83	0.00	-128.38	-1.23	0.00	0.00	0.00
4,800.00	4.78	270.00	4,794.48	0.00	-136.71	-1.31	0.00	0.00	0.00
4,900.00	4.78	270.00	4,894.13	0.00	-145.04	-1.39	0.00	0.00	0.00
5,000.00	4.78	270.00	4,993.78	0.00	-153.37	-1.47	0.00	0.00	0.00
5,100.00	4.78	270.00	5,093.44	0.00	-161.70	-1.55	0.00	0.00	0.00
5,200.00	4.78	270.00	5,193.09	0.00	-170.03	-1.63	0.00	0.00	0.00
5,300.00	4.78	270.00	5,292.74	0.00	-178.37	-1.71	0.00	0.00	0.00
5,400.00	4.78	270.00	5,392.39	0.00	-186.70	-1.79	0.00	0.00	0.00
5,500.00	4.78	270.00	5,492.05	0.00	-195.03	-1.87	0.00	0.00	0.00
5,600.00	4.78	270.00	5,591.70	0.00	-203.36	-1.95	0.00	0.00	0.00
5,700.00	4.78	270.00	5,691.35	0.00	-211.69	-2.03	0.00	0.00	0.00
5,800.00	4.78	270.00	5,791.00	0.00	-220.03	-2.11	0.00	0.00	0.00
5,900.00	4.78	270.00	5,890.66	0.00	-228.36	-2.19	0.00	0.00	0.00
6,000.00	4.78	270.00	5,990.31	0.00	-236.69	-2.27	0.00	0.00	0.00
6,100.00	4.78	270.00	6,089.96	0.00	-245.02	-2.35	0.00	0.00	0.00
6,200.00	4.78	270.00	6,189.61	0.00	-253.35	-2.43	0.00	0.00	0.00
6,300.00	4.78	270.00	6,289.26	0.00	-261.69	-2.51	0.00	0.00	0.00
6,400.00	4.78	270.00	6,388.92	0.00	-270.02	-2.59	0.00	0.00	0.00
6,500.00	4.78	270.00	6,488.57	0.00	-278.35	-2.67	0.00	0.00	0.00
6,600.00	4.78	270.00	6,588.22	0.00	-286.68	-2.75	0.00	0.00	0.00
6,700.00	4.78	270.00	6,687.87	0.00	-295.01	-2.83	0.00	0.00	0.00
6,800.00	4.78	270.00	6,787.53	0.00	-303.34	-2.91	0.00	0.00	0.00
6,900.00	4.78	270.00	6,887.18	0.00	-311.68	-2.99	0.00	0.00	0.00
7,000.00	4.78	270.00	6,986.83	0.00	-320.01	-3.07	0.00	0.00	0.00
7,100.00	4.78	270.00	7,086.48	0.00	-328.34	-3.15	0.00	0.00	0.00
7,200.00	4.78	270.00	7,186.14	0.00	-336.67	-3.23	0.00	0.00	0.00
7,300.00	4.78	270.00	7,285.79	0.00	-345.00	-3.31	0.00	0.00	0.00
7,400.00	4.78	270.00	7,385.44	0.00	-353.34	-3.39	0.00	0.00	0.00
7,500.00	4.78	270.00	7,485.09	0.00	-361.67	-3.47	0.00	0.00	0.00
7,600.00	4.78	270.00	7,584.74	0.00	-370.00	-3.55	0.00	0.00	0.00
7,700.00	4.78	270.00	7,684.40	0.00	-378.33	-3.63	0.00	0.00	0.00
7,800.00	4.78	270.00	7,784.05	0.00	-386.66	-3.71	0.00	0.00	0.00

PHOENIX TECHNOLOGY SERVICES

Planning Report

TITUS OIL GAS LLC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 434H
Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3198.50usft (H&P 474)
Project:	Lea County, NM - (NAD83 NME)	**MD Reference:**	RKB @ 3198.50usft (H&P 474)
Site:	El Campeon Fed Com	**North Reference:**	Grid
Well:	434H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 4 08-05-21		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,900.00	4.78	270.00	7,883.70	0.00	-394.99	-3.79	0.00	0.00	0.00
8,000.00	4.78	270.00	7,983.35	0.00	-403.33	-3.87	0.00	0.00	0.00
8,100.00	4.78	270.00	8,083.01	0.00	-411.66	-3.95	0.00	0.00	0.00
8,200.00	4.78	270.00	8,182.66	0.00	-419.99	-4.03	0.00	0.00	0.00
8,300.00	4.78	270.00	8,282.31	0.00	-428.32	-4.11	0.00	0.00	0.00
8,400.00	4.78	270.00	8,381.96	0.00	-436.65	-4.19	0.00	0.00	0.00
8,500.00	4.78	270.00	8,481.62	0.00	-444.99	-4.27	0.00	0.00	0.00
8,600.00	4.78	270.00	8,581.27	0.00	-453.32	-4.35	0.00	0.00	0.00
8,700.00	4.78	270.00	8,680.92	0.00	-461.65	-4.43	0.00	0.00	0.00
8,700.83	4.78	270.00	8,681.75	0.00	-461.72	-4.43	0.00	0.00	0.00
Begin 1.50°/100' Drop									
8,800.00	3.29	270.00	8,780.67	0.00	-468.70	-4.50	1.50	-1.50	0.00
8,900.00	1.79	270.00	8,880.57	0.00	-473.13	-4.54	1.50	-1.50	0.00
9,000.00	0.29	270.00	8,980.55	0.00	-474.95	-4.56	1.50	-1.50	0.00
9,019.45	0.00	0.00	9,000.00	0.00	-475.00	-4.56	1.50	-1.50	462.72
Begin Vertical Hold									
12,030.49	0.00	0.00	12,011.04	0.00	-475.00	-4.56	0.00	0.00	0.00
KOP2, Begin 10.00°/100' Build									
12,100.00	6.95	168.45	12,080.38	-4.13	-474.16	-0.43	10.00	10.00	0.00
12,200.00	16.95	168.45	12,178.09	-24.39	-470.02	19.87	10.00	10.00	0.00
12,300.00	26.95	168.45	12,270.72	-60.97	-462.54	56.52	10.00	10.00	0.00
12,400.00	36.95	168.45	12,355.46	-112.75	-451.96	108.40	10.00	10.00	0.00
12,500.00	46.95	168.45	12,429.74	-178.16	-438.59	173.94	10.00	10.00	0.00
12,600.00	56.95	168.45	12,491.29	-255.21	-422.84	251.14	10.00	10.00	0.00
12,700.00	66.95	168.45	12,538.26	-341.57	-405.20	337.67	10.00	10.00	0.00
12,800.00	76.95	168.45	12,569.20	-434.61	-386.18	430.88	10.00	10.00	0.00
12,900.00	86.95	168.45	12,583.19	-531.49	-366.38	527.95	10.00	10.00	0.00
12,930.89	90.04	168.45	12,584.00	-561.74	-360.20	558.26	10.00	10.00	0.00
LP, Hold 90.04° Inc, Begin 4.00°/100' Turn									
13,000.00	90.04	171.21	12,583.95	-629.76	-348.00	626.39	4.00	0.00	4.00
13,100.00	90.04	175.21	12,583.88	-729.04	-336.19	725.78	4.00	0.00	4.00
13,200.00	90.04	179.21	12,583.82	-828.90	-331.33	825.68	4.00	0.00	4.00
13,205.85	90.04	179.45	12,583.81	-834.75	-331.26	831.53	4.00	0.00	4.00
Hold 179.45° Azm									
13,300.00	90.04	179.45	12,583.75	-928.90	-330.35	925.68	0.00	0.00	0.00
13,400.00	90.04	179.45	12,583.69	-1,028.89	-329.39	1,025.68	0.00	0.00	0.00
13,500.00	90.04	179.45	12,583.62	-1,128.89	-328.43	1,125.68	0.00	0.00	0.00
13,600.00	90.04	179.45	12,583.56	-1,228.88	-327.47	1,225.68	0.00	0.00	0.00
13,700.00	90.04	179.45	12,583.49	-1,328.88	-326.50	1,325.68	0.00	0.00	0.00
13,800.00	90.04	179.45	12,583.43	-1,428.88	-325.54	1,425.68	0.00	0.00	0.00
13,900.00	90.04	179.45	12,583.36	-1,528.87	-324.58	1,525.68	0.00	0.00	0.00
14,000.00	90.04	179.45	12,583.30	-1,628.87	-323.61	1,625.68	0.00	0.00	0.00
14,100.00	90.04	179.45	12,583.23	-1,728.86	-322.65	1,725.68	0.00	0.00	0.00
14,200.00	90.04	179.45	12,583.17	-1,828.86	-321.69	1,825.68	0.00	0.00	0.00
14,300.00	90.04	179.45	12,583.10	-1,928.85	-320.72	1,925.68	0.00	0.00	0.00
14,400.00	90.04	179.45	12,583.04	-2,028.85	-319.76	2,025.68	0.00	0.00	0.00
14,500.00	90.04	179.45	12,582.97	-2,128.84	-318.80	2,125.68	0.00	0.00	0.00
14,600.00	90.04	179.45	12,582.91	-2,228.84	-317.83	2,225.68	0.00	0.00	0.00
14,700.00	90.04	179.45	12,582.85	-2,328.83	-316.87	2,325.68	0.00	0.00	0.00
14,800.00	90.04	179.45	12,582.78	-2,428.83	-315.91	2,425.68	0.00	0.00	0.00
14,900.00	90.04	179.45	12,582.72	-2,528.82	-314.94	2,525.68	0.00	0.00	0.00
15,000.00	90.04	179.45	12,582.65	-2,628.82	-313.98	2,625.68	0.00	0.00	0.00
15,100.00	90.04	179.45	12,582.59	-2,728.81	-313.02	2,725.68	0.00	0.00	0.00
15,200.00	90.04	179.45	12,582.52	-2,828.81	-312.06	2,825.68	0.00	0.00	0.00

PHOENIX TECHNOLOGY SERVICES

Planning Report

TITUS OIL GAS LLC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 434H
Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3198.50usft (H&P 474)
Project:	Lea County, NM - (NAD83 NME)	**MD Reference:**	RKB @ 3198.50usft (H&P 474)
Site:	El Campeon Fed Com	**North Reference:**	Grid
Well:	434H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 4 08-05-21		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,300.00	90.04	179.45	12,582.46	-2,928.81	-311.09	2,925.68	0.00	0.00	0.00
15,400.00	90.04	179.45	12,582.39	-3,028.80	-310.13	3,025.68	0.00	0.00	0.00
15,500.00	90.04	179.45	12,582.33	-3,128.80	-309.17	3,125.68	0.00	0.00	0.00
15,600.00	90.04	179.45	12,582.26	-3,228.79	-308.20	3,225.68	0.00	0.00	0.00
15,700.00	90.04	179.45	12,582.20	-3,328.79	-307.24	3,325.68	0.00	0.00	0.00
15,800.00	90.04	179.45	12,582.13	-3,428.78	-306.28	3,425.68	0.00	0.00	0.00
15,900.00	90.04	179.45	12,582.07	-3,528.78	-305.31	3,525.68	0.00	0.00	0.00
16,000.00	90.04	179.45	12,582.00	-3,628.77	-304.35	3,625.68	0.00	0.00	0.00
16,100.00	90.04	179.45	12,581.94	-3,728.77	-303.39	3,725.68	0.00	0.00	0.00
16,200.00	90.04	179.45	12,581.87	-3,828.76	-302.42	3,825.68	0.00	0.00	0.00
16,300.00	90.04	179.45	12,581.81	-3,928.76	-301.46	3,925.68	0.00	0.00	0.00
16,400.00	90.04	179.45	12,581.74	-4,028.75	-300.50	4,025.68	0.00	0.00	0.00
16,500.00	90.04	179.45	12,581.68	-4,128.75	-299.53	4,125.68	0.00	0.00	0.00
16,600.00	90.04	179.45	12,581.62	-4,228.75	-298.57	4,225.68	0.00	0.00	0.00
16,700.00	90.04	179.45	12,581.55	-4,328.74	-297.61	4,325.68	0.00	0.00	0.00
16,800.00	90.04	179.45	12,581.49	-4,428.74	-296.64	4,425.68	0.00	0.00	0.00
16,900.00	90.04	179.45	12,581.42	-4,528.73	-295.68	4,525.68	0.00	0.00	0.00
17,000.00	90.04	179.45	12,581.36	-4,628.73	-294.72	4,625.68	0.00	0.00	0.00
17,100.00	90.04	179.45	12,581.29	-4,728.72	-293.76	4,725.68	0.00	0.00	0.00
17,200.00	90.04	179.45	12,581.23	-4,828.72	-292.79	4,825.68	0.00	0.00	0.00
17,300.00	90.04	179.45	12,581.16	-4,928.71	-291.83	4,925.68	0.00	0.00	0.00
17,400.00	90.04	179.45	12,581.10	-5,028.71	-290.87	5,025.68	0.00	0.00	0.00
17,500.00	90.04	179.45	12,581.03	-5,128.70	-289.90	5,125.68	0.00	0.00	0.00
17,600.00	90.04	179.45	12,580.97	-5,228.70	-288.94	5,225.68	0.00	0.00	0.00
17,700.00	90.04	179.45	12,580.90	-5,328.69	-287.98	5,325.68	0.00	0.00	0.00
17,800.00	90.04	179.45	12,580.84	-5,428.69	-287.01	5,425.68	0.00	0.00	0.00
17,900.00	90.04	179.45	12,580.77	-5,528.68	-286.05	5,525.68	0.00	0.00	0.00
18,000.00	90.04	179.45	12,580.71	-5,628.68	-285.09	5,625.68	0.00	0.00	0.00
18,100.00	90.04	179.45	12,580.64	-5,728.68	-284.12	5,725.68	0.00	0.00	0.00
18,200.00	90.04	179.45	12,580.58	-5,828.67	-283.16	5,825.68	0.00	0.00	0.00
18,300.00	90.04	179.45	12,580.51	-5,928.67	-282.20	5,925.68	0.00	0.00	0.00
18,400.00	90.04	179.45	12,580.45	-6,028.66	-281.23	6,025.68	0.00	0.00	0.00
18,500.00	90.04	179.45	12,580.39	-6,128.66	-280.27	6,125.68	0.00	0.00	0.00
18,600.00	90.04	179.45	12,580.32	-6,228.65	-279.31	6,225.68	0.00	0.00	0.00
18,700.00	90.04	179.45	12,580.26	-6,328.65	-278.35	6,325.68	0.00	0.00	0.00
18,800.00	90.04	179.45	12,580.19	-6,428.64	-277.38	6,425.68	0.00	0.00	0.00
18,900.00	90.04	179.45	12,580.13	-6,528.64	-276.42	6,525.68	0.00	0.00	0.00
19,000.00	90.04	179.45	12,580.06	-6,628.63	-275.46	6,625.68	0.00	0.00	0.00
19,100.00	90.04	179.45	12,580.00	-6,728.63	-274.49	6,725.68	0.00	0.00	0.00
19,200.00	90.04	179.45	12,579.93	-6,828.62	-273.53	6,825.68	0.00	0.00	0.00
19,300.00	90.04	179.45	12,579.87	-6,928.62	-272.57	6,925.68	0.00	0.00	0.00
19,400.00	90.04	179.45	12,579.80	-7,028.61	-271.60	7,025.68	0.00	0.00	0.00
19,500.00	90.04	179.45	12,579.74	-7,128.61	-270.64	7,125.68	0.00	0.00	0.00
19,600.00	90.04	179.45	12,579.67	-7,228.61	-269.68	7,225.68	0.00	0.00	0.00
19,700.00	90.04	179.45	12,579.61	-7,328.60	-268.71	7,325.68	0.00	0.00	0.00
19,800.00	90.04	179.45	12,579.54	-7,428.60	-267.75	7,425.68	0.00	0.00	0.00
19,900.00	90.04	179.45	12,579.48	-7,528.59	-266.79	7,525.68	0.00	0.00	0.00
20,000.00	90.04	179.45	12,579.41	-7,628.59	-265.82	7,625.68	0.00	0.00	0.00
20,100.00	90.04	179.45	12,579.35	-7,728.58	-264.86	7,725.68	0.00	0.00	0.00
20,200.00	90.04	179.45	12,579.28	-7,828.58	-263.90	7,825.68	0.00	0.00	0.00
20,300.00	90.04	179.45	12,579.22	-7,928.57	-262.94	7,925.68	0.00	0.00	0.00
20,400.00	90.04	179.45	12,579.16	-8,028.57	-261.97	8,025.68	0.00	0.00	0.00
20,500.00	90.04	179.45	12,579.09	-8,128.56	-261.01	8,125.68	0.00	0.00	0.00
20,600.00	90.04	179.45	12,579.03	-8,228.56	-260.05	8,225.68	0.00	0.00	0.00

PHOENIX TECHNOLOGY SERVICES

Planning Report

TITUS OIL GAS LLC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 434H
Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3198.50usft (H&P 474)
Project:	Lea County, NM - (NAD83 NME)	**MD Reference:**	RKB @ 3198.50usft (H&P 474)
Site:	El Campeon Fed Com	**North Reference:**	Grid
Well:	434H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 4 08-05-21		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
20,639.73	90.04	179.45	12,579.00	-8,268.29	-259.66	8,265.41	0.00	0.00	0.00
TD at 20639.74									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BHL v4 - El Campeon Fe - plan hits target center - Rectangle (sides W100.00 H7,608.70 D0.00)	-0.04	179.45	12,579.00	-8,268.29	-259.66	365,148.46	835,599.65	32° 0' 1.158954 N	103° 23' 2.687706 W
LTPv3 - El Campeon Fe - plan misses target center by 0.06usft at 20549.74usft MD (12579.06 TVD, -8178.30 N, -260.53 E) - Point	0.00	0.00	12,579.00	-8,178.30	-260.55	365,238.45	835,598.76	32° 0' 2.049487 N	103° 23' 2.688865 W
FTPv3 - El Campeon Fe - plan misses target center by 11.05usft at 13031.80usft MD (12583.93 TVD, -661.24 N, -343.49 E) - Point	0.00	0.00	12,584.00	-659.94	-332.52	372,756.81	835,526.79	32° 1' 16.450183 N	103° 23' 2.757814 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
20,668.04		20" Casing	20	24

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
3,000.00	3,000.00	0.00	0.00	KOP, Begin 1.50°/100' Build
3,318.62	3,318.25	0.00	-13.28	Hold 4.78° Inc at 270.00° Azm
8,700.83	8,681.75	0.00	-461.72	Begin 1.50°/100' Drop
9,019.45	9,000.00	0.00	-475.00	Begin Vertical Hold
12,030.49	12,011.04	0.00	-475.00	KOP2, Begin 10.00°/100' Build
12,930.89	12,584.00	-561.74	-360.20	LP, Hold 90.04° Inc, Begin 4.00°/100' Turn
13,205.85	12,583.81	-834.75	-331.26	Hold 179.45° Azm
20,639.73	12,579.00	-8,268.29	-259.66	TD at 20639.74

Titus Oil & Gas Production, LLC - El Campeon Fed Com 434H

1. Geologic Formations

TVD of target	12,579' EOL	Pilot hole depth	NA
MD at TD:	20,639'	Deepest expected fresh water:	400'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1079	Water	
Top of Salt	1536	Salt	
Base of Salt	5028	Salt	
Lamar	5337	Salt Water	
Delaware	5372	Salt Water	
Bone Spring Lime	9227	Oil/Gas	
1st Bone Spring	10514	Oil/Gas	
2nd Bone Spring	11003	Oil/Gas	
3rd Bone Spring	12125	Oil/Gas	
Wolfcamp	12478	Oil/Gas	
Wolfcamp X Sand	12512	Oil/Gas	
Wolfcamp Y Sand	12571	Target - Oil/Gas	
Wolfcamp A	12603	Oil/Gas	
Wolfcamp B	12900	Oil/Gas	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body
	From	To							
13.5"	0	1105	10.75"	45.5	J55	BTC	4.13	0.81	14.22
9.875"	0	12000	7.625"	29.7	HCL80	BTC	1.18	1.05	2.04
6.75"	0	11800	5.5"	20	P110	BTC	1.85	1.92	3.22
6.75"	11800	20,639	5"	18	P110	BTC	1.85	1.92	3.22
			BLM Minimum Safety Factor				1.125	1	1.6 Dry 1.8 Wet

Intermediate casing will be kept at least 1/3 full while running casing.to mitigate collapse.
Surface burst based on 0.7 frac gradient at the shoe with Gas Gradient 0.1 psi/ft to surface and
All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

The 5” casing will be run back 200’ into the intermediate casing to ensure the coupling OD clearance is greater than .422” for the cement bond tie in.

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	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary?	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

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3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	250	13.5	1.75	9	12	Lead: Class C + 4% Gel + 1% CaCl2
	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl2
Int	900	10.3	3.6	22.95	16	TXI Lightwieght Blend
	250	15.0	1.27	5.72	8	Tail: Class H
Prod	350	11.9	2.5	19	72	Lead: 50:50:10 H Blend
	950	14.2	1.3	6.2	19	Tail: 50:50:2 Class H Blend

Contigency remediation cement plan for intermediate casing if cmt is not circulated to surface:

1st Stage - Bradenhead Stage Notes

Operator will pump 1000+ sx of Class C and allow cement to fall into place. Operator will not put any fluid on top of the cement after the fall. This will leave annuls filled with air to TOC. We will WOC +/- 2 hrs (or when surface samples are firm enough) to ensure cement is set up. TOC will be above the Lamar allowing for the fill up stage.

2nd Stage - Fill Up Stage Notes

After WOC to allow the Bradenhead Stage to set up, operator will proceed with the Fill Up Stage. Since there is only air in the annulus (no fluid will be placed in annulus after bradenhead stage), we will pump cement with opposite valve set to allow air to displace out. Fill up cement will be mixed and pumped until returns are taken to surface to complete the fill up. This will confirm a solid column of cement in the annulus all the way to surface completing the top out job. Operator will WOC after cement returns have been taken to surface.

Casing String	TOC	% Excess
Surface	0’	50%
1st Intermediate	0’	50%
Production	11,500'	35% OH in Lateral (KOP to EOL)

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4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
9-7/8”	13-5/8”	5M	Annular	x	5000 psi
			Blind Ram		5M
			Pipe Ram		
			Double Ram		
			Other*		
6-3/4”	13-5/8”	10M	Annular	x	5M
			Blind Ram	x	10M
			VBR Ram	x	
			VBR Ram	x	
			Other*		

See attached 5M Annular Variance Well Control plan for TItus Oil & Gas Production, LLC.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
	N Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

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5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	9-5/8" Int shoe	Nova N-Gauge	8.4 - 9	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	11 - 12	35-45	<20

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing.	
Y	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
N	No Logs are planned based on well control or offset log information.
N	Drill stem test? If yes, explain.
N	Coring? If yes, explain.

Additional logs planned		Interval
N	Resistivity	Pilot Hole TD to ICP
N	Density	Pilot Hole TD to ICP
Y	CBL	Production casing (If cement not circulated to surface)
Y	Mud log	Intermediate shoe to TD
N	PEX	

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7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	7850 psi at 12579' TVD
Abnormal Temperature	NO 180 Deg. F.

No abnormal pressure or temperature conditions are anticipated. Sufficient mud materials to maintain mud properties and weight increase requirements will be kept on location at all times.

Sufficient supplies of Paper/LCM for periodic sweeps to control seepage and losses will be maintained on location.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S Plan attached

8. Other Facets of Operation

Y	Is it a walking operation?
N	Is casing pre-set?

x	H2S Plan.
x	BOP & Choke Schematics.
x	Directional Plan
x	Multibowl Schematic

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Titus Oil and Gas**
LEASE NO.:	**NMNM126974**
LOCATION:	Section 20, T.26 S., R.35 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	El Campeon Fed Com 434H
SURFACE HOLE FOOTAGE:	558'/S & 650'/E
BOTTOM HOLE FOOTAGE	10'/S & 989'/E

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☑ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **10-3/4** inch surface casing shall be set at approximately **1100** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8**

hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:
   - Cement to surface. If cement does not circulate see B.1.a, c-d above.

Wait on cement (WOC) time for a primary cement job is to include the tail cement slurry due to cave/karst .

Operator has proposed to pump down 7-5/8"and 10-3/4" annulus. Operator must run a CBL from TD of the 7-5/8" casing to surface. Submit results to BLM.

The minimal max MW in this location is 12.5 ppg due to the Abnormal Pressure.

3. The minimum required fill of cement behind the **5-1/2 x 5** inch production casing is:
   - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

   a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
   b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
   c. Manufacturer representative shall install the test plug for the initial BOP test.
   d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
   e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including

lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.
ZS 081821

1. Component and Preventer Compatibility Table

The table below covers drilling and casing of the 10M MASP portion of the well and outlines the tubulars and the compatible preventers in use. Combined with the mud program, the below documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

Component	OD	Preventer	RWP
Drill pipe	4.5”	Upper 4.5-7” VBR Lower 4.5-7” VBR	10M
HWDP	4.5”		
Jars	4.5”		
Drill collars and MWD tools	4.75-5.75”		
Mud Motor	4.75-5.75”		
Production casing	5.5” x 5”		
ALL	0 - 13-5/8”	Annular	5M
Open-hole	-	Blind Rams	10M

VBR = Variable Bore Ram with compatible range listed in chart.

2. Well Control and Shut-In Procedures

Well control procedures are specific to the rig equipment and the operation at the time the kick occurs. Below are minimum tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. The maximum pressure at which well control is transferred from the annular to another compatible ram is 2500 psi.

Drilling:

1. Sound the alarm (alert rig crew)
2. Space out the drill string
3. Shut down pumps and stop the rotary
4. Shut-in the well with the annular with HCR and choke in closed position
5. Confirm the well is shut-in
6. Notify contractor and company representatives
7. Read and record the following data
    - Time of shut-in
    - SIDPP and SICP
    - Pit gain
8. If pressure has increased to or is anticipated to increase to 2500 psi, confirm spacing and close the upper pipe rams.
9. Prepare for well kill operation.

Tripping:

1. Sound alarm (alert rig crew)
2. Stab full opening safety valve and close the valve
3. Space out the drill string
4. Shut-in the well with the annular with HCR and choke in closed position
5. Confirm shut-in
6. Notify contractor and company representatives
7. Read and record the following data:

- Time of shut-in
- SIDPP and SICP
- Pit gain

8. If pressure has increased to or is anticipated to increase to 2500 psi, confirm spacing and close the upper pipe rams.
9. Prepare for well kill operation.

Running Casing

1. Sound alarm (alert rig crew)
2. Stab crossover and valve and close the valve
3. Shut-in the well with annular with HCR and choke in closed position
4. Confirm shut-in
5. Notify contractor and company representatives
6. Read and record the following data
   - Time of shut-in
   - SIDPP and SICP
   - Pit gain
7. If pressure has increased to or is anticipated to increase to 2500 psi, confirm spacing and close the upper pipe rams.
8. Prepare for well kill operation

No Pipe in Hole (Open Hole)

1. Well will be shut in with blind rams and choke in closed position, while HCR is open at any point when pipe or BHA are not in BOP stack. If pressure increase is observed:
2. Sound alarm (alert crew)
3. Confirm shut-in
4. Notify contractor and company representatives
5. Read and record the following data
   - Time of shut-in
   - Time of pressure increase
   - SICP
6. Prepare for well kill operation

Pulling BHA through BOP Stack

1. Prior to pulling last joint/stand of drillpipe through the stack, perform a flow check. If well is flowing:
   a. Sound alarm (alert crew)
   b. Stab full opening safety valve and close the valve
   c. Space out the drill string
   d. Shut-in the well with the annular with HCR and choke in closed position
   e. Confirm shut-in
   f. Notify contractor and company representatives
   g. Read and record the following data
      - Time of shut-in
      - SIDPP and SICP
      - Pit gain
   h. If pressure has increased to or is anticipated to increase to 2500 psi, confirm spacing and close the upper pipe rams.
   i. Prepare for well kill operation.

2. With BHA in the stack:
    a. If possible to pick up high enough, pull BHA clear of the stack
        i. Follow "Open Hole" procedure above
    b. If impossible to pick up high enough to pull BHA clear of the stack:
        i. Stab crossover, make up one joint/stand of drillpipe, and full opening safety valve and close
        ii. Space out drill string with tooljoint just beneath the upper pipe ram.
        iii. Shut-in the well with upper pipe ram with HCR and choke in closed position
        iv. Confirm shut-in
        v. Notify contractor and company representatives
        vi. Read and record the following:
            - Time of shut-in
            - SIDPP and SICP
            - Pit gain
        vii. Prepare for well kill operation.

3. Well Control Drills

Well control drills are specific to the rig equipment, personnel and operation at the time a kick occurs. Each crew will execute one drill weekly relevant to ongoing operations, but will make a reasonable attempt to vary the type of drills. The drills will be recorded in the daily drilling log. Below are minimum tasks for respective well control drills.

Drilling/Pit:

Action	Responsible Party
Initiate Drill • Lift Flow Sensor or Pit Float to indicate a kick • Immediately record start time	Company Representative / Rig Manager
Recognition • Driller and/or Crew recognizes indicator • Driller stop drilling, pick up off bottom and spaces out drill string, stop pumps and rotary • Conduct flow check	Driller
Initiate Action • Sound alarm, notify rig crew that the well is flowing	Company Representative / Rig Manager
Reaction • Driller moves BOP remote and stands by • Crew is at their assigned stations • Time is stopped • Record time and drill type in the Drilling Report	Driller / Crew

Tripping Pit Drills (either in the hole or out of the hole)

Action	Responsible Party
Initiate Drill • Lift Flow Sensor or Pit Float to indicate a kick • Immediately record start time	Company Representative / Rig Manager
Recognition • Driller recognizes indicator • Suspends tripping operations • Conduct Flow Check	Driller
Initiate Action • Sound alarm, notify rig crew that the well is flowing	Company Representative / Rig Manager
Reaction • Position tool joint above rotary and set slips • Stab FOSV and close valve • Driller moves to BOP remote and stands by • Crew is at their assigned stations • Time is stopped • Record time and drill type in the Drilling Report	Driller / Crew

Choke

Action	Responsible Party
• Have designated choke operator on station at the choke panel • Close annular preventer • Pressure annulus up 200-300 psi • Pump slowly to bump the float and obtain SIDPP • At choke operator instruction, slowly bring pumps online to slow pump rate while holding casing pressure constant at the SICP. • Allow time for the well to stabilize. Mark and record circulating drillpipe pressure. • Measure time lag on drillpipe gauge after choke adjustments. • Hold casing pressure constant as pumps are slowed down while choke is closed. • Record time and drill type in the Drilling Report	Company Man / Rig Manager & Rig Crew

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 45347

CONDITIONS

Operator: Titus Oil & Gas Production, LLC 420 Throckmorton St, Ste 1150 Fort Worth, TX 76012	OGRID: 373986
	Action Number: 45347
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	9/1/2021